

## **Read Between The Lines: Beyond the “Vitamins Don’t Work” Myth**

Newspaper headlines have been trumpeting the news that vitamins C and E do not prevent heart attack, stroke or cancer. The most recent report, titled “Extra Vitamin E: No Benefit, Maybe Harm,” was published in Jane Brody’s Personal Health column in the 24 March 2009 edition of the *New York Times*. Because Brody is widely respected as a health journalist, her messages are often received as gospel. But those who understand the fundamentals of nutrition can read between the lines. For example, before discussing the vitamin E research, Brody issues this comment: “Some vitamin E enthusiasts object that the clinical studies used what they consider the wrong form of the vitamin, saying that each of the vitamin’s eight forms has its own biological activity. But the kind of vitamin E used in most studies, alpha-tocopherol, is the most active form in humans, according to the National Institutes of Health’s (NIH’s) Office of Dietary Supplements.”

In that single, artful statement, the esteemed journalist manages to dismiss the crucial argument that mixed tocopherols—the eight forms of vitamin E naturally present in food—have far greater efficacy as a supplement compared to alpha tocopherol. Rather than discuss the science that demonstrates the superiority of mixed tocopherols, Brody points to the NIH—which happens to be the main source of funding for the clinical trials she cites—as the final word on whether alpha tocopherol alone is a valid form for study. Never mind that studies published in peer-reviewed scientific journals have shown that mixed tocopherols are far more powerful in protecting human cells from the ravages of toxins, aging, and disease.

Among the other fundamental errors made in recent vitamin studies is to assume that studies of a single nutrient can lead to measurable health benefits. But we've known for decades that multiple nutrients are far more effective than single nutrients—just as multiple nutrients are found in food, one cannot take a single nutrient and expect to see favorable results. Our evolutionary mandate is to receive our nutrition much as we would from food—that is, presenting the nutrients to the body in combinations rather than as single, synthetic nutrients taken in isolation.

Nutrition scientist Lester Packer of the University of California at Berkeley was among the first to drive home the importance of this perspective. Dr. Packer describes the interactions between antioxidant vitamins as a “network”, with each vitamin’s activities complementing and reinforcing those of other vitamins. When antioxidants encounter harmful free radicals and neutralize them, they themselves become weak oxidants (free radical sources) and can then be neutralized and recycled by other antioxidants. Thus the end result of combining antioxidants is to create a high degree of antioxidant power. Such combined or “network” effects may be critical to the success of vitamin studies.

Similarly, it's important to understand that a supplement is literally a *supplement*, not a substitution for healthy eating. None of the negative vitamin studies have bothered to try to improve the diets people were consuming. And yet, many people today take their vitamins thinking that they can just go ahead and continue eating in ways that actually promote disease. But an imbalanced diet and other unhealthy lifestyle habits can sabotage any supplement regimen.

Another common problem in vitamin research is that the faulty studies have used dosages well below the amounts shown in earlier vitamin studies to be effective in preventing heart disease, cancer and other conditions. If an individual lacks a particular nutrient, they are going to benefit from taking a larger dose of that particular nutrient. And unless you individually tailor your supplement regimen, many supplements are just a waste of money. The key is to figure out which combinations of nutrients are ideal for a particular individual, based on individual biochemistry and other factors.

Sensational reporting on negative vitamin studies can be very effective in discouraging the public from taking vitamins. But these studies should be a call to the FDA to bolster the quality of research on dietary supplements, to urge an individualized approach to supplementation, and to increase the recommended doses of vitamins to levels known to be effective for those individuals who are deficient.

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